

TESTING THE “LEARNING FOR SUSTAINABILITY” APPROACH IN A TRAINING OF TRAINERS

Contribution to new learning theory and approaches

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Abstract

Mainstreaming the LforS approach is a challenge due to diverging institutional priorities, customs, and expectations of classically trained staff. A workshop to test LforS theory and practice, and explore how to mainstream it, took place in a concrete context in a rural district of Mozambique, focusing on agricultural, forest and water resources. The evaluation showed that the principles of interaction applied permitted to link rational knowledge with practical experience through mutual learning and iterative self-reflection. The combination of learning techniques was considered useful; participants called for further opportunities to apply the LforS methodology, proposing next steps.

Keywords

Institutionalisation; integrative educational approach; mutual learning; Training of Trainers; natural resource management; Mozambique.

Summary

Socially and ecologically non sustainable development is systemically rooted; moreover, poverty and depletion of environmental resources are caused by indirect drivers in current mainstream policies and institutions, as underlined by the Millennium Ecosystem Assessment MEA 2005). Research has shown that discussions about and theoretical concepts focusing on sustainable development require an integrative perspective and, in the case of research, a transdisciplinary approach with a strong focus on social learning (Rist, WEEC 2007). To respond to this need in the field of sustainable resource management, the Centre for Development and Environment at the University of Berne (CDE) has developed an approach, LforS (Learning for Sustainability), consisting of an overall conceptual framework, different modules and tools. One of these is the Basic Module; it introduces sustainable resource management in a workshop that normally lasts three weeks and takes place in a rural community setting.

The innovative approach and design of LforS reflects the complexity of issues at stake when dealing with non sustainable development in a particular context, as well as the need for evaluation based on shared values. Developing capacity for sustainable resource management as well as visions that integrate both resource users' perspectives and existing scientific knowledge requires transdisciplinary, joint-learning-based research in order to consider and avoid existing systemic failures leading to non sustainability. This implies using adult education approaches based mainly on existing local knowledge and experience and leading to empowerment of the target group.

After a pilot phase, the Basic Module was widely applied in many countries and continents for 10 years; training of trainers was mainly done by learning on the job. This was also the case for two workshops in Cabo Delgado Province (Ancuabe and Meluco districts), Mozambique; upon demand from participants, a further one-week workshop on the concept and moderation of LforS was carried out in Pemba Metuge in 2005. Indeed, experience in Mozambique and in other countries revealed that it is difficult to mainstream the innovative LforS approach due to diverging institutional priorities and customs, and the fact that institutional staff rely on classical training.

To initiate a change, CDE undertook first steps in direct collaboration with the Faculty of Education of the University Eduardo Mondlane (UEM). The partnership started with a seven-day pilot workshop on the theoretical foundations of LforS in July 2006 in the rural district of Namuno (Cabo Delgado province). It was attended by 16 participants, including leading staff of the Faculty of Education and of NGOs involved in rural development, and

scientists working and teaching in the field of education and community development. The workshop was held in a remote rural district, following the principle of LforS that learning should take place in the field, and the programme was based on mutual learning in group discussions and complemented by interactions with seven representatives of the neighbouring community of Miliponi, including site visits to their agricultural fields, forest and water sources for direct observation of natural resources and how they are being managed by the community. Further discussions on site were held regarding improvement of resource management.

At the end of the workshop, an evaluation was done by the participants. The principles of interaction applied allowed participants to link rational and science-based knowledge with practice-oriented experience of mutual learning. Using self-reflection, the participants succeeded in going through learning processes and evaluating what happened. The outcomes of the evaluation showed an astonishingly homogenous picture. All participants said that the combination of learning techniques, which included group discussions of theoretical concepts, use of concrete examples of existing resources in rural Mozambican communities, and interaction with a community and its natural resources, helped them to experience new interrelations and the importance of individual values that each of those concerned – including themselves – attributed to people and nature. They called for additional opportunities to become more familiar with the LforS methodology, suspecting that the institutional and social situation in their daily work would not allow them to develop the newly acquired competence. One specific demand was that a network of individuals with experience in such methods be created. Another was that the approach be integrated into modules currently being developed for adult education at UEM. Furthermore, participants suggested that the learning approach be adapted for topics other than natural resource management.

Introduction

Learning for Sustainability (**LforS**) is a new approach for the integration of human knowledge, developed in 1995 by a large interdisciplinary group of researchers and consultants, among whom Felicitas Bachmann, Ernst Gabathuler and Andreas Kläy (Bachmann, 2003). It is applicable to learning processes that aim at fostering and strengthening local capabilities for development and sustainable resource management. Drawing on the work by several authors (Long and Villareal, 1994; Scoones and Thompson, 1994; Chambers, 1994), Bachmann, Gabathuler and Kläy state that such an aim requires a

new, complementary dimension in professionalism, which implies a need for change and learning processes at the following levels:

- At the interface between different knowledge systems which emerges in resource management involving internal (local resource users, institutional representatives and decision makers) and external actors (agricultural traders, government representatives, decision makers, development agents, extensionists, consultants, scientists, etc.);
- In the education and training of development experts, scientists, decision makers: conventional technical and disciplinary knowledge must be complemented by skills in communication, moderation, mediation and institutional development;
- At the institutional level: institutional reforms should enable change from teaching styles to learning styles. Institutions need to provide creative learning environments and conditions under which learning can take place through experience, open and equal dynamic interaction, and personal exploration and experimentation.

In addition, learning needs to take on a new quality and be oriented towards self-reflection, self-esteem and empowerment of individuals and groups through interaction involving everybody as teachers and trainees. This means that the contents, objectives, and methods of learning have to be adjusted to the needs and potentials of the participants.

Accordingly, the objective of Learning for Sustainability is to initiate and foster social learning processes among different stakeholders (local and external) in a local context (Rist, WEEC 07). Step by step, the participants of workshops jointly construct an in-depth understanding of the local context by integrating their respective experience, knowledge and perspectives. A workshop moderator and common exercises guide them through their reflections, observations and dialogue process.

Another crucial feature of the approach is that Lfor S activities should not stand alone but be integrated in a programme context. A follow-up process is required to make the best use of the outcomes of the workshops, which usually provide an ideal basis for implementation-oriented activities. Existing examples of outcomes of the different modules are: a codex for rules of conduct in conflict situations; rules for the sustainable use of natural resources; management plans for the conservation of specific natural resources; natural hazard risk maps indicating risk zones and respective prevention measures, etc.

This approach has been successfully tested in collaboration with partner institutions around the world. A joint learning process involving development staff, researchers and local actors evolves on the basis of shared, in-depth discussions and reflections on the conditions, potentials and dynamics of development in the specific local context. NGOs and GOs have

found LforS modules to be effective for building capacity among technicians and community leaders, as well as for empowering local communities.

The demand in Mozambique and the limitations experienced so far with on-the-job training of moderators in pilot workshops led to the idea of designing a training of trainers (ToT) workshop with the following general objectives:

- Knowledge exchange and knowledge creation about the interrelations between sustainable development and management of natural resources in a rural context in Mozambique.
- Familiarization of the participants with the concept of LforS and its practice of communication and learning based on Theme-Centred Interaction (Cohn, 1984).
- Identification of the opportunities to make use of the approach applied in the module for sustainable resource management and rural development in university training and research.

The methodological and pedagogical characteristics of the approach are the logical consequence of the need for a broader epistemological base and a research process called transdisciplinary research – an approach that fulfils the principle of participation and is recognized today by development cooperation (Hirsch and Pohl 2006).

Location of the Mozambican Training of Trainers' workshop

Namuno district is located in the south of the province of Cabo Delgado and is quite typical of remote rural areas in northern Mozambique. It has a population of approximately 188,000 inhabitants and covers over 69,000 km² of sub-humid tropical open savannah forest and cultivated land. Because of its relative remoteness and size, biodiversity in this region is high. Trees such as umbila, jambire, chanfuta and pau-preto in this mostly open savanna forest can reach 20 meters and thus have a high timber value. Many animal species roam through the savannah, including lions, elephants, leopards, buffalos, gazelles and antelopes. Agriculture is the dominant source of livelihoods in Namuno district; production is family based and mainly subsistence oriented.

Under the current administrative and management plan, there is no clear division of land use into biological reserves and areas for human use. This has led to controversies due to frequent illegal logging by external actors for timber, disregarding basic principles of sustainable land use and causing heavy forest degradation. This appropriation of economic value by external actors and destruction of the local potential of natural resources is the main

reason why the workshop organizers chose Namuno. The coexistence of rural poverty and natural resource extraction by external actors reveals the current weakness of national institutions, which are not able to help local actors overcome poverty through sustainable resource management; it also proves that natural resources still have the potential of offering the local population additional value, provided their interests are taken into account. The overall goal of LforS in this case was thus defined as development of corresponding capacity at the local level in Namuno; this was explicitly reflected in the ToT workshop.

Methodology of Learning for Sustainability (LforS)

The gap between practical and scientific knowledge, and a lack of skills in participatory learning processes, in methodological and epistemological knowledge and experience in research for sustainable development and in sustainable natural resource management are deplored in numerous scientific publications on sustainable development. Leading philosophers such as Carl Friederich von Weizsäcker (1988) state that the current disciplinary mainstream science is actually a part of the problem, and even presents a danger for human society. Therefore, apart from a transdisciplinary approach, the explicit integration of an ethical dimension in science is an additional prerequisite for tackling sustainable development.

Methodological basis of the LforS approach

The ALS methodology is a tool for capacity building for both local and external actors in the field of natural resource management and conflict transformation, as well as an approach that enables integration of various stakeholders' interests and perceptions. CDE's experience in developing transdisciplinary approaches in different research programmes qualifies and motivates it for further exploration of this crucial field of scientific contributions to sustainable development. The LforS approach is based on integration of the concept of sustainable management of natural resources (Kläy 1995, Wiesmann 1995, CDE 1995 and 1998), a systemic approach (Churchman 1979) and Theme-Centred Interaction (Cohn 1978).

Sustainable natural resource management requires taking into account the different perceptions of stakeholders involved in managing the different functions of local natural resources, while sustainability requires maintaining the functions as agreed through negotiation between all stakeholders concerned. This conceptual framework has been confirmed by the Millennium Ecosystem Assessment (MEA 2005), in which the four categories of ecosystem services listed correspond to the functions of resources considered in

LforS. Churchman's Systems Approach is applied in LforS to enable a comprehensive and participative perception of social systems. The systems approach also allows for reasoning and integration of subjectivity, complexity and holistic views, while also revealing the limits of rationality. Churchmann recognises politics, morality, (dogmatic) religion, and aesthetics as the four limitations in reasoning and names them "the (four) enemies of the Systems Approach" (Churchman 1979, Ulrich 1980). Cohn's Theme-Centred Interaction offers the foundations for value-related learning processes between participants with very different cultural, educational and ethnic backgrounds (Kuebel 2002). The explicit ethical foundation is established in the second axiom of Theme-Centered Interaction: "*Reverence is due to everything living and to its growth. Respect for growth necessitates value judgments in decisions. The humane is valuable, the inhumane is threatening to values.*" (Cohn 1984).

Means for the implementation of LforS

- *To make learning an experience:* A range of didactic elements address the different senses of the learners and support visual, auditory, and communicative learning. Through interactive and participatory methods such as role play, simulation games, stories, proverbs and songs, interviews and observation exercises, learning is fostered at the cognitive, emotional and social levels.
- *Integrating different stakeholder perspectives:* A learning group consists of 10 to 20 people, who represent different stakeholder perspectives, age and gender groups. Each participant brings his or her specific experiences in the learning process.
- *Mutual learning:* The participants learn together and from each other. In the group learning and dialogue process, the knowledge, experience and perspective of each participant is equally important.
- *Role of the moderator:* His/her main tasks are a) to shape the learning process in order to create a conducive environment for meaningful reflection and dialogue; and b) to provide the learning group with methodological support, to structure and summarize discussions, and to point to contradictions that may arise during discussions.
- *Active, situated learning:* The frame of reference of an LforS workshop is a concrete local context, e.g. a community, a village, a whole valley, etc. The learning process focuses on the local context without ignoring broader framework conditions.
- *Fostering personal encounters:* During the time of the workshop local and external participants live together, i.e. external participants are accommodated locally, meals are shared and leisure time is time for informal encounters. As a result, trust strongly

increases among the participants and friendships may develop across formerly rigid social borders.

- *Final event:* at the end of a training workshop, important results, insights and conclusions from the learning process are presented to the community.

The LforS learning process: building a systemic view of the local context

Step by step, workshop participants develop a systemic understanding of the local context by:

- Focusing on important single aspects and highlighting their interrelations: all important economic, socio-cultural, ecological and institutional aspects are considered. Conclusions from previous exercises are resumed and their meaning reassessed in the context of new insights and questions.
- Understanding change processes: interviews with elderly and knowledgeable people, and the evaluation of relevant sources of information make dynamics of change and ecological, social and economic trends become apparent.
- Identifying problems, potentials and opportunities: besides discussing current problems, existing potentials and opportunities are emphasized and prospectively debated.

LforS aims to integrate the different actor perspectives in the learning process, which makes the participation of both women and men as indispensable as participation of stakeholders from the different socio-economic groups. Such a mixed group of local people complemented by external participants needs up to one week to develop an intense and integrated learning capacity, because there is a need to gain common ground for understanding similar to a shared paradigm (Kuhn 1978) or community of thinking (Fleck 1935). Up to the ToT workshop in Namuno, the introduction of the LforS approach was done by learning on the job in order to enable direct realisation of workshops ideally during three weeks in the local context. The additional high cost of a previous theoretical introduction was avoided; the disadvantage was that it was not possible to establish partnerships with adult education and training institutions and prepare the integration of the approach in the established institutional setting. The Namuno ToT workshop therefore specifically targeted trainers active in university education and in development project implementation.

LforS Training of Trainers

The didactic approach of the Training of Trainers (ToT) was to maintain the basic principles of LforS. The specific focus on aspects for trainers and the reduction of the heterogeneity of the learning group made it possible to address methodological issues explicitly, but it was

clear that this opportunity to address didactic questions in depth cannot replace the experience of learning in a normal LforS workshop with a mixed group consisting of individuals who learn and “teach” at the same time.

The programme of the ToT workshop was based on iteration between conventional oral and written inputs by the co-moderators and learning in the group based on the concept of Theme-Centred Interaction. The reduction to a one-week programme was the price for a compromise permitting to bring together trainers from the main national institution for learning - the Faculty of Education at UEM - and trainers from development NGOs in the real context of a remote district. The full integration of the local resource users into the learning process would have been the best solution from the theoretical point of view of Theme-Centered Interaction; but given the social and institutional frameworks in Mozambique, the one-week ToT was a good compromise. In order to get information on and impressions of the dimensions addressed and discussed in an LforS Basic Module workshop, some sessions took place with representatives of the village of Milipone and two visits in the village were organized as part of the programme.

Training of trainers workshop in Namuno

Preparatory meetings prior to the ToT Workshop

An experts’ meeting of science educators, community educators, geographers and water scientists, was held in Maputo, the capital of Mozambique, aiming at understanding the teaching-learning LforS workshop approach. This was followed by a second meeting of experts in the city of Pemba, the capital of Cabo Delgado province. In addition to those who attended the previous meeting, a community educator from another higher education institution in Mozambique and two experts from CDE (Switzerland) attended. The aim of the meeting was to agree on the sequence of activities following the LforS approach and the roles of the workshop facilitators. Finally, formal meetings with district administrators and leaders of a local community were held to get permission to conduct the workshop and validate its content.

Representativeness of participants in the Namuno Workshop

To hold a one -week workshop in a remote district in northern Mozambique with 7 participants from Swiss and Mozambican universities and 7 others from NGOs active in rural development in Cabo Delgado and Nampula province was an organizational challenge. In the

district centre of Namuno a simple restaurant and hotel offered the venue and accommodation for the participants; one representative of the district administration joined the workshop without staying at the hotel.

In this workshop, the number of male participants was higher than the number of female participants (14 men and only 2 women). This situation is representative of the under-representation of women in the relevant institutions and organizations. In future it will be very important to better integrate female perspectives, because the active involvement and participation of women allows them to offer their specific experience and helps strengthen their self-esteem and position in social negotiation processes concerned with sustainable resource management. To encourage institutional learning for increased gender balance, the learning approach presented here seems ideal, as it also prepares the initiation of shifts in perception regarding gender and other social unbalances in communities, organizations, and institutions.

Indeed, the problem of marginalization as a social group is obvious and frequently stated for women, but less so for other disadvantaged social groups. Exceptionally, in the Namuno ToT workshop all participants were staff members of an organization and the main stakeholders of rural development were only visited by this group to have at least a direct perception of the conditions under which the normal application of an LforS workshop takes place. This was the compromise made in this first attempt to introduce scientists and higher education staff to the LforS method.

What we did with the local actors of Miliponi

In the first visit to Miliponi the workshop participants briefly presented their workshop activity and the importance of contacts with the villagers to gain an insight into the rural reality. The leaders of the village were asked to designate a socially mixed delegation from Miliponi who would participate in some of the sessions in town. During a second visit, the delegation and the population were asked to discuss in mixed groups, do a mapping of the Miliponi territory and position their resources. Later on, the participants visited some of the nearby sites with specific importance for resource management in Miliponi. The visits to the village and ensuing discussions made contact between workshop participants and the population possible, and allowed them to get in touch with rural reality. However, as part of the compromise of this ToT workshop design, participants maintained a conventional relation with the resource users, who were not integrated as participants; moreover, they chose the district centre as a venue instead of the village, and did not stay for three weeks.

Discussion of the Training of Trainers workshop

Need for and limitation of compromises in applying the LforS principles in ToTs

Evidently, great flexibility and very pragmatic decisions by the moderator of the learning process are necessary to meet the challenges of introducing the methodological and topical basis for LforS, practicing Theme-Centered Interaction, and working with 15 participants whose attitude is influenced by their classical training as (dominant) educators, in a venue located in a remote rural district. Although the principles were therefore often disregarded, participants did succeed in developing the necessary attitude for mutual learning in the course of the week and have individual experience of LforS. Experience of the quality of integrative learning for sustainable development based on Theme-Centered Interaction is the key to LforS and therefore also the foundation of a ToT workshop.

The introduction to the theoretical basis for Theme-Centered Interaction was done at the beginning of the workshop; group sessions held daily as of the first day offered space for training learning in and as a group. However, it was only possible to develop the practice of group learning in the plenary step by step and after the work in smaller groups; by the end of the workshop, participants succeeded in discussing theory using the form of group learning introduced in the smaller groups⁰. This integration of theory and practice proved to be crucial for ToT, in clear contrast to the normal practice of LforS, where the themes discussed concern topical issues of resource management and rural development.

Evaluation of capacity development

Discussions during the workshop and the evaluation by participants at the end revealed a good understanding and reflected experience of the innovative learning approach and of its importance for strengthening capacity for sustainable development. Individual perceptions were obviously initially quite different due to major differences in experience and former training, but a shared understanding and experience was created through the learning process during the workshop. That is the starting point for further development and offers the potential to go on with the approach, by sharing and maintaining separate follow-up Lfor S processes in a network that takes into account individual potentials and limitations. However, external limitations remain significant. As expressed by one of the teachers for adult education, the institutional environment at the University will push him back into his conventional role as teacher; without further exercise and space for reflection, the skills and

potential created in the ToT workshop will be soon decrease. Thus the progress achieved will not automatically lead to a further impact of the individual competence gained, meaning that the approach has come a step further but is still far from a breakthrough in the sense of a mainstreaming.

The question of how to achieve the institutional adjustment enabling learning approaches such as LforS thus remains open. The Mozambican ToT workshop was designed to open ways for mainstreaming and up-scaling LforS by integrating it into educational institutions and offering a module for ToT. The immediate outcome of the learning process is promising, as it will enable the designing of programmes integrating the LforS approach with the aim of contributing to sustainable development. But institutions, administrations and implementation programmes are not waiting for such challenging integration processes; on the contrary, they remain very reluctant to engage with profound change, even though scientists and experts see the need for it. In the specific case of the workshop presented here, an ex-post evaluation meeting to assess the importance of the LforS approach for the Faculty of Education in Maputo showed a good perception by the workshop participants, who made clear statements about the importance of Lfor S for education for sustainable development in general, and specifically in adult education. Follow-up activities will depend on decision makers and the possibility of influencing them remains very limited.

As contact with the village was reduced to conventional dimensions, it was not possible to assess the relation between local and external participants, as would have been the case in an implementation of a three-week LforS Basic Module. Instead of assessing this aspect of experience, the ToT workshop participants reflected on the superficial, and therefore insufficient, nature of communication with the villagers during the workshop. It was thus possible to use this experience as a negative example of how such communication reproduces blueprints and preconceptions, eventually leading to failure of sustainable development projects.

Conclusion

The first experience of a Training of Trainers workshop for the Learning for Sustainability approach showed that the combination of conventional theoretical teaching, the main aspects of the concept, and the experience stimulated by group learning based on Theme-Centered Interaction enabled participants to understand and perceive the foundations of LforS. The evaluation by the participants confirmed the rationale and the effectiveness of this practice of integrative learning in groups.

The difficulties incurred, mainly in the preparation but also increasingly after the workshop, show the strong constraints imposed by institutionalized conventions regarding learning and interaction. Thus the hope of operating a breakthrough thanks to the workshop had to be given up. This leads to the conclusion that responsibility for educational innovation aiming for more sustainable forms of development lies increasingly with every individual aware of the educational, scientific, and institutional shortcomings of present societies.

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